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Before the

FEDERAL COMMUNICATIONS COMMISSION

Washington, DC 20554

In the Matter of )  
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 Federal-State Joint Board on )CC Docket No. 96-45  
 on Universal Service )  
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**RE: FCC RULEMAKING ON UNIVERSAL SERVICE: NEED FOR A TWO-TRACK APPROACH**

**Introduction**

On March 20, 1996 a diverse coalition of public-interest groups applied for an extension in time for submission of comments and replies to comments to the FCC's Notice of Proposed Rulemaking (NPRM) CC Docket No. 96-45. The authors of this paper support that request, and additionally advocate developing a two-track approach to address the many complex issues associated with promulgating new universal service regulations as directed by the Telecommunications Act of 1996 (1996 Act).<sup>1</sup> This paper focuses particularly on questions and issues concerning the expansion of the universal service definition to support access to advanced telecommunications and information services for public schools and libraries.

<sup>1</sup> Telecommunications Act of 1996, PL 104-104, 110 Stat. 56 (1996) (to be codified at 47 U.S.C. Secs. 151 *et seq.* For clarity we will follow the Commission's practice of citing the sections of the 1996 Act at which they will be codified.

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The paper is divided into four sections. First, it presents the need for a two-track approach. Second, it identifies and analyzes issues regarding advanced telecommunications services universal service that deserve extended deliberation. Third, it provides recommendations for a limited number of advanced telecommunications services for inclusion on the fast track. Finally, the paper closes with brief concluding remarks reiterating the authors' support for universal service principals.

## **I. The Need for a Two-Track Approach**

Congress has directed the Commission to promulgate rules on a large number of issues in a relatively short timeframe.<sup>2</sup> The Commission's ambitious schedule will strain not only its resources, but, as evidenced by the referenced March 20 request, the resources of the public-interest groups wishing to participate in many of these proceedings. The authors suggest splitting the Commission's proceedings on universal services into at least two processes:

- A fast-track approach that is relatively limited in scope but essentially conforms to the congressionally mandated schedule and guidance;
- A longer-term approach that establishes a framework for a more extensive analysis of the many significant issues involved with expanding the range of services supported by universal service policies and funds.

The authors are particularly concerned that allowing only short-term debate on the definition of advanced and "special" services to be supported by universal service policies will:

- Complicate deliberations due to ambiguities that exist with regard to congressional intent and definition of advanced services;
- Complicate development of funding mechanisms due to the increases in total subsidies that will be required to support universal access to advanced services and jeopardize public-interest objectives relating to the continued support of "Plain Old Telephone Service" (POTS);

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<sup>2</sup> Schedule available from FCC WWW home page at <http://www.fcc.gov>.

- Undermine the effort to reach workable compromises among the various stakeholder groups that could improve near-term access to networked information services.

In short, the accelerated schedule proposed by the Commission will result in hasty rulemaking that does not adequately consider the various issues at work.

Congress has authorized the Commission to designate “special services” for schools, libraries, and health care providers to be supported by universal service mechanisms. PL 104-104, however does not adequately define the term “special services.” The ambiguity leaves room for confusion whether “special services” constitute a separate class of services distinct from the “advanced services” also referenced in the bill.

Additionally, the legislative record is not clear as to whether affordable access implies affordable services or whether universal service mechanisms can be used to subsidize information services as well as telecommunications services. Some level of agreement on all of these definitional issues must be reached before policy analysts can develop support mechanisms and assess their cost. This issue will be more thoroughly discussed in Section II.

Telecommunications deregulation is undermining the traditional funding mechanisms used to subsidize universal access to basic telecommunications services, i.e., POTS; and the changing telecommunications landscape will necessitate the development of new universal service funding mechanisms. The mandate for inclusion of advanced/special services in the universal service definition will not only increase the total amount of funds that must be identified to support universal service subsidies but also complicate the development of new revenue collection mechanisms.<sup>3</sup>

The rulemaking process is further complicated by discord between service interest groups, some which advocate a continuing emphasis on POTS connectivity, and others which wish to push for near-term inclusion of advanced services in the universal service definition. POTS advocates point out that existing universal service policies have left some segments of the population under-served, and express concern that the inclusion of

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<sup>3</sup> Essentially, if X amount of funds are required to subsidize POTS, then X plus Y amount of funds would be required to subsidize access to advanced services such as ISDN.

advanced services for the public in the definition of universal service will result in higher residential rates and undermine efforts to extend basic telecommunications services to currently underserved segments of the population.<sup>4</sup> The authors expect that similar objections will be raised against subsidizing a wide range of special services for public institutions emphasized by the library and education universal service advocates.

This apparent lack of agreement among public-interest advocates regarding the emphasis placed on POTS for underserved segments of society and the likelihood of increasing residential telephone rates may significantly complicate the policy debate associated with the universal service rulemaking process -- particularly given the limited amount of time that the Commission has to issue its initial set of regulations. The authors are particularly concerned that public-interest groups, by requesting the extension of universal service policies to cover a wide range of services, may miss out on an opportunity to reach agreement on a more limited range of services that could begin to substantially address the special needs of libraries and schools. We fear that an extensive unresolved debate in the time allotted for rulemaking will leave little time to negotiate a critical set of near-term special services to which most parties could agree. Section III outlines a first attempt at identifying near-term special services for public schools and libraries.

Another reason for a two-track approach to rulemaking is that the authors are in the process of completing the 1996 national survey of public libraries and the Internet.<sup>5</sup> This survey follows from a similar effort completed in 1994.<sup>6</sup> As of April 8, 1996, data from

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<sup>4</sup> Mary Gardiner Jones, "The Consumer Interest in Telecommunications Infrastructure Modernization," *Information Infrastructure Sourcebook*, Version 1.1 (Cambridge, MA: John F. Kennedy School of Government, Harvard University, July 19, 1993):291; Information Infrastructure Task Force, Telecommunications Policy Committee, *The NII Field Hearings on Universal Service and Open Access: America Speaks Out*, NTIA Special Publication 94-29 (Washington, DC: US Department of Commerce, September, 1994); and Peter Shields, Brenda Dervin., Christopher Richter and Richard Soller, "Who Needs 'POTS-plus' Services? A Comparison of Residential User Needs Along the Rural-urban Continuum," *Telecommunications Policy*, (November 1993).

<sup>5</sup> John Carlo Bertot, Charles R. McClure and Douglas L. Zweizig, *Public Libraries and Access/Use of the Internet: Issues and Findings*. (Washington DC: National Commission on Libraries and Information Science, forthcoming)

<sup>6</sup> Charles R. McClure, John Carlo Bertot, and Douglas L. Zweizig, *Public Libraries and the Internet: Study Results, Policy Issues, and Recommendations*. (Washington DC: National Commission on Libraries and Information Science, 1994).

the 1996 survey are being keyboarded for analysis. Findings from the study are expected to provide important information regarding discrepancies in access, costs for networked-based services, and types of services that might be considered as “special services” as outlined in PL 104-104. Full analysis of the data, however, is not expected to be completed until June, 1996.

Essentially, the authors expect the universal service policy debate to be extremely complicated. Intentionally segmenting the process to consider how special services for public schools and libraries should be incorporated into universal service policies will allow time to:

- Implement and assess how new universal mechanisms are working;
- Assess how markets for advanced telecommunications and information services are developing; and
- Collect and assess empirical data on which advanced telecommunications services provide the most benefits to which specific groups.

The authors’ position of an incremental approach to expanding the range of services to be supported for schools and libraries should not be misinterpreted. We strongly believe these special services are valuable and needed. Sufficient time however, must be allowed to define the services, assess the full costs and benefits of these services, and effectively plan for their provision. As will be discussed in Section III, there are relatively limited initiatives that can be taken to significantly increase near-term access to networked information services while more optimal long-term policies are developed.

## **II. Advanced Telecommunications and Information Services “Meta-Issues” Needing Extended Deliberation**

Although the authors concede the need of the Commission to expeditiously proceed with rulemaking on universal service issues to comply with Congressional mandates, the Commission should deliberately choose to not address certain issues until some later date, when a more prolonged rule making process is possible. The authors believe that the following problems deserve more extended deliberation than currently possible under Commission’s time constraints:

1. *Did Congress intend to provide universal service for both telecommunications and information services?*
2. *Is there an intended distinction between “special services” and “advanced services”?*
3. *Is there an intended distinction between universal access and universal service?*
4. *Is it necessary to distinguish, and if so, how should we distinguish telecommunications services from information services?*

PL 104-104, in providing guidance to the Joint Board and Commission, establishes the universal service principle that, “Access to advanced telecommunications and *information services* should be provided in all regions of the Nation” (emphasis added)<sup>7</sup>. This section clearly mentions both telecommunications and information services. The bill also states however, that “[t]he Joint Board in recommending, and the Commission in establishing, the definition of services that are supported by Federal universal support mechanisms shall consider the extent to which *such telecommunications services*” meet specified criteria (emphasis added).<sup>8</sup> This section, in contrast to the former, only mentions telecommunications services. This discrepancy raises the issue of whether Congress intended to include both telecommunications and information services, or only telecommunications services in its definition of universal access.

The ambiguity is carried into the NPRM where the Commission first addresses both telecommunications and information services:

While in the past, the Commission has focused on bringing basic telecommunications services to as many American homes as possible, this principle instructs us to focus specifically on advanced telecommunications and information services. We seek comment on which advanced telecommunications and information services should be provided, and how to provide access effectively...<sup>9</sup>

The Commission then drops the reference to both telecommunications and information in identifying advanced services to include in the universal access definition, inviting

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<sup>7</sup> PL 104-104, Sec. 254(b)(2).

<sup>8</sup> *Ibid.*, Sec. 254(c)(1).

<sup>9</sup> CC Docket No. 96-45, Par. 5.

“parties to discuss advanced services that may warrant inclusion, now or in the future, in the list of services supported by universal service support mechanisms.”<sup>10</sup> Additionally, most of the language in Sections III, IV and V of the NPRM clearly refer to only telecommunications services, not telecommunications and information services.

Accordingly, the Commission should clarify their understanding of Congressional intent. Is Congress only willing to subsidize (or rate average) advanced telecommunications services required to access advanced information services? Or does the Commission believe that Congress is willing to subsidize the information services as well?

A second issue concerns the Commission’s need to clarify the relationship between the terms “special services” and “advanced services.” PL 104-104 defines special services as “additional services that the Commission may designate to be supported for schools, libraries and public health institutions for the purposes of subsection (h).”<sup>11</sup> Subsection (h) lists “Advanced Services” as one of several services provided to schools, libraries and hospitals. Congress has charged the Commission to “enhance, to the extent technically feasible and economically reasonable, access to advanced telecommunications *and* information services for all public and nonprofit elementary and secondary school classrooms, health care providers, and libraries”(emphasis added).<sup>12</sup> As written in the bill, advanced services appear as a subset of special services. The commission needs to clarify its interpretation of these terms and their relationship to each other. If one interprets “advanced services” as a subset of “special services”, then “special services” appears to encompass access to both telecommunications services *and* information services. Therefore, the Commission needs to consider the implications of the definitions of these terms and their relationship to each other in the context of its interpretation of Congressional intent regarding the types of services that can be subsidized in accordance with the law.

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<sup>10</sup> *Ibid.*, Par. 23.

<sup>11</sup> PL 104-104, Sec. 254(c)(3).

<sup>12</sup> *Ibid.*, Sec. 254(h)(2)

A third issue concerning access to advanced services -- telecommunications or information -- pertains to the affordability of the infrastructure required by public institutions to fully use the advanced services supported, and the distinction between universal access and universal service. Are advanced services truly affordable if telecommunications carriers terminate their high-speed access lines at some arbitrary service access point and leave in-house wiring (power and communications), system hardware and system software for consumer or institutional customers to purchase? What about training? Access costs, leased communications, represent a relatively small ,3.5 to 15 percent, of the total system costs, service costs, that must be expended by public institutions in implementing a complete information infrastructure.<sup>13</sup>

Universal service implies more than simply providing access by dropping a high-speed circuit at the doors of our schools and libraries. Ensuring universal service, the use of advanced telecommunications and information services by all Americans, will require substantial investment in both end-user equipment and training. Is the Commission willing to have universal service funds used to subsidize the additional system elements that are required to achieve universal service? Or, will universal service funds be limited to supporting telecommunications connectivity only?

A final area of ambiguity concerns our ability to clearly distinguish advanced telecommunications services from information services. As one attempts to parse the wide range of advanced telecommunications and information services that are coming to the market, distinguishing which service (or part of a service) should be categorized as an information service and which should be categorized as a telecommunications service will likely prove difficult. For example, would email hosts or video servers be considered telecommunications devices or information processing devices? This definitional problem is not only relevant to the discussion regarding which services should be subsidized but also has implications for identifying industries or industry

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<sup>13</sup> Russell I. Rothstein, *Connecting K-12 Schools to the NIH: A Preliminary Assessment of Technology Models and Their Associated Costs* (Washington DC: US Department of Education, Office of Educational Technology August 4, 1994); McKinsey & Company, *Connecting K-12 Schools to the Information Superhighway* (1995) and Charles R. McClure, John Carlo Bertot and John C. Beachboard, *Internet Costs and Cost Models for Public Libraries* (Washington, DC: National Commission on Libraries and Information Science, June 1995).



segments that should contribute to universal funding. These meta-issues can be expected to overload the rulemaking process in the short timeframe allowed by the Commission. All interests will be better served if a more extended process is initiated to address these issues.

### **III. A Fast-track Approach for Expanding Access to Networked Information Services for Public Libraries and Schools**

Recognizing the need for fast action to comply with Congressional desires, the authors recommend that the FCC implement several low-cost, simple services which begin to fulfill the requirements set for by Congress. Recommended actions include:

- 1. Ensuring availability of dial-up Internet access points within the local calling area of all public schools and libraries.*
- 2. Adjusting tariffs of public schools and libraries for telecommunications services to reflect only actual cost including return on capital investments.*
- 3. Providing direct subsidies to ensure rate comparability among public institutions in rural, high cost areas and urban regions for specified data transmission capacities.*

While unlimited dial-up access to the Internet/WWW can now be obtained in many parts of the nation at rates ranging from \$20 to \$40 per month, residents and public institutions in many rural locations face toll charges (generally intrastate) to reach the dial-access ports of Internet providers. For example, some rural libraries in New York State were found to be unable to pay intrastate charges to access Internet service provider points-of-presence (POPs) due to excessive costs.<sup>14</sup>

One relatively low-cost, and quickly implemented solution for expanding access to networked information services would be to establish dial-up Internet access points within the local area of all telephone subscribers within the country and insular regions. Small, medium or large Internet Service Providers (ISPs) would be able to bid on

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<sup>14</sup> US Senate. Subcommittee on Education, Arts and Humanities, *Examining the Role of Libraries in Developing America's New Information Infrastructure*, S. Hrg. 103-569, Washington, DC: GPO (April 19, 1994) and Charles R. McClure, Waldo C. Babcock, Karen A. Nelson, Jean Armour Polly and Stephen R. Kankus, *The Project Gain Report: Connecting Rural Public Libraries to the Internet* (Syracuse, NY: Nysernet, Inc., February, 1994).

establishing access-points in underserved areas. Revenues could be monitored to allow for a gradual reduction of universal service support as usage grows and the service becomes commercially viable. This suggestion provides a relatively low-cost, low-tech solution to the significant problem of providing rural access to online information services for both public institutions and residential subscribers.

Two recommendations should substantially promote access to advanced/special telecommunications and networked information services for public schools and libraries:

- First, the Commission should adjust tariffs of qualified public institutions for all telecommunications services (whether intrastate or interstate) to reflect only the actual costs of providing service including a fair return on capital investments. This recommendation would require the Commission to discount normal tariffs to the extent that they include cross-subsidization of other telecommunications services. For example, many public institutions are charged business-rates for their telephone services -- a portion of which subsidizes residential access. Cross-subsidization also occurs with intrastate and interstate toll charges. Such reductions could constitute a significant cost savings for these institutions -- regardless of what services they use. As the actual costs of providing the service should be fully recovered, one hopes that this provision would not face substantial resistance by the telecommunications industry and should not draw directly on universal service funds.
- Second, the Commission should make available direct subsidies from the universal access fund to establish rate comparability among rural, high-cost and urban regions for (technology independent) T-1 and fractional T-1 capacity data transmission paths. This recommendation does not call for a subsidy of the tariffs for urban institutions beyond the discounted rates identified above. Rural public institutions desiring higher-speed connection to the Internet face higher costs than urban institutions due to distance sensitive charges for data-grade circuits needed to reach Internet access points. The proposal would subsidize rural/high-cost connectivity only to the extent that offered services exceed

average urban rates, identified by the state's public utility commission, by some percentage (e.g. 20 percent). Competitive neutrality could be maintained by having the institutions apply for universal funds directly while competitively contracting for the desired telecommunications service.

Clearly, many details would need to be worked out to implement these or similar recommendations. And some would argue that these recommendations do not go nearly far enough in promoting access to special services for public institutions. However, these recommendations are offered for near-term consideration because: (1) they offer a rapid and cost-effective approach to extending public access to existing technologies; (2) they should not place the types of financial burdens on the telecommunications industry that would inhibit investment in advanced telecommunications nor require substantive increases to residential access rates; and (3) they should not severely burden universal service funding and distribution mechanisms.

#### **IV. Conclusions**

Congress, in PL 104-104, has recognized the need for an evolving definition of universal service. Accordingly, the many complex and interrelated issues identified in the Commission's NPRM and discussed in this paper should be broken down into workable chunks and dealt with over time. A coherent set of regulations for implementing universal service policies in accordance with the principles established by Congress cannot be developed in the time the Commission has been allotted. The phased approach recommended above should allow public institutions to obtain significant near-term benefits by promoting access to the Internet. Acceptance of the proposed near-term recommendations will reduce telecommunications costs faced by all schools and libraries and start to level the playing field between rural and urban regions of the Nation.

The authors' acceptance of relatively limited near-term universal-service objectives for public schools should be viewed as a tactical position. We do not believe that these limited recommendations truly fulfill the universal service principles enumerated in PL 104-104. *Universal service* for advanced telecommunications and information services

for public institutions will not exist until support is provided for expanding their internal information infrastructures and providing the staff and training required to effectively employ the technology. Further, considerable discussion will be needed to define the functionalities that should be present in libraries and schools to meet universal service requirements and principles. We expect to see the full needs of these institutions more clearly articulated in the submissions of public interest groups such as the American Library Association.

Uncertainty regarding some of the definitional issues identified above and the potential costs of greatly expanded universal service support will likely undermine support for more aggressive universal service proposals. The recommendations provided above for improving near-term access to networked information services are achievable, are consistent with congressional guidance and address several of the major barriers inhibiting public schools and libraries from accessing the Internet.

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